

# PRODUCT OVERVIEW

## INDUSTRIAL HYDRAULICS



**DIPLOMATIC**  
MOTION SOLUTIONS

**HT**  
HIDRAUTRONICA  
SISTEMAS HIDRÁULICOS

# ABOUT THIS GUIDE

This guide is intended for a smart overview of our industrial hydraulics and let you find quickly the product you need.

data sheet ref.

main characteristics, available versions and options are shown together for quick comparison.

A brief description of the features follows.

The highlighted letter that precedes the description is the same letter that identifies the option in the identification code, in the data sheet, for an easy reference.

Not all the options are available for all versions: always verify technical data, details and availability in the technical data sheet.

MODEL CODE	E5	DSP7	E5	DSP10
CATALOG	41.400	41.420	41.400	41.440
SIZE (IN)	1/2	3/4	1	1 1/2
CETOP	05, 095	07	08	10
ISO 4001	E5	07	08	10
TYPE	external	external	external	external
p max	100bar	95 bar	280 bar	280 bar
p max High pressure valve	420bar	420 bar	420 bar	420 bar
Q max	150 l/min	100 l/min	300 l/min	1200 l/min
SPOLS	3/2, 3/3, 3/4, 4/3	■	■	■
5/5, 5/8	■	■	■	■
5/6, 5/12	■	■	■	■
5/8, 5/21	■	■	■	■
6/4, 5/8	■	■	■	■
6/4, 5/8 To SA/584	■	■	■	■
7/6, 7/6	■	■	■	■
8/6, 7/6	■	■	■	■
7/21, 7/21	■	■	■	■
8/6, 8/6, 8/6	■	■	■	■
COL TYPE	E12, E24	■	■	■
240, 210, 210	■	■	■	■
AD, A, A2, A2, A2	■	■	■	■
1/2, 1/2	■	■	■	■
COL CONNECTIONS	H1	■	■	■
K7, H1 and DN 40	■	■	■	■
MANUAL OVERRIDE	CH	■	■	■

**OPTIONS**  
 MICROFILTR: see dedicated section at page «Accessories»  
 EXPLOSION PROOF: see catalogue 4212  
 HYDRAULIC OPERATED: described in the valves datasheets  
 HIGH PRESSURE VERSION: ■  
 P: Pilot/Overload ■ Internal ■ External with pressure reduction ■ Internal with built-in backpressure valve ■ External/Internal (application cases available elsewhere)  
 ORFILL: ■ ORFILL with control ■ ORFILL with speed control ■ ORFILL with a shifting control ■ ORFILL with a shifting control ■ ORFILL with a shifting control  
 ALTERNATIVE SURFACE FINISHES: ■ Zinc Nickel (but spray resistance up to 400 hours)

You can find data sheets always up-to-date in various languages by scanning this QR code with your smartphone



or on our webpages at:

[www.duplomatic.com/products](http://www.duplomatic.com/products)

[www.hidrautronica.com](http://www.hidrautronica.com)

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VALVES, DIRECTIONAL CONTROL

**INDUSTRIAL** ■

For more information, please contact our Commercial Sector by e-mail on [ht@hidraultronica.com](mailto:ht@hidraultronica.com) or by phone on (31) 3503-1650.

# DIRECTIONAL VALVES

## SOLENOID - DIRECT OPERATED



MODEL CODE	DL2	DS3	DL3	DL3B	DS5	DL5	DL5B
CATALOGUE	41 100	41 150	41 211	41 220	41 310	41 330	41 335
SIZE	04	06		10			
ISO 4401 / CETOP	02	03		05			
TYPE	Standard	Standard	Compact version	8W Low consumption	Standard	Compact version	Compact version
p max	250 bar	350 bar	280 bar	280 bar	320 bar	320 bar	320 bar
Q max	20 l/min	100 l/min	50 l/min	60 l/min	150 l/min	125 l/min	125 l/min

### SPOOLS

S1; S2; S3; S4	■	■	■	■	■	■	■
S5; S6; S7; S8		■			■		
S9 to S29		■			■		
SA* ; SB*	■	■	■	■	■	■	■
RSA* ; RSB*		■					
TA ; TB	■	■	■	■	■	■	■
TA02 ; TB02		■	■	■	■	■	■
TA23 ; TB23		■	■		■	■	■
TA/TB 30; TA/TB 33		■					
RK		■	■	■	■		
RK1; RK02; 1RK		■			■		

### COIL TYPE

D12	■	■	■		■	■	■
D14		■					
D24	■	■	■	■	■	■	■
D28		■	■			■	■
D48		■	■				
D110; D125; D220		■			■		
A24; A48; A110; A230		■	■		■	■	
F110; F220		■			■		
R110; R220	■		■				

### COIL CONNECTIONS

K1	■	■	■	■	■	■	■
K2		■	■				■
K4			■				
K7		■	■		■		■
K7D (diode)		■	■				■
K8			■				

### MANUAL OVERRIDES

CM		■	■		■	■	■
CH		■	■				
CP		■					■
CK / CK1		■	■		■	■	■
CPK		■	■				■

### FEATURES ++

MONITORED **M** - see dedicated section at page 20

EXPLOSION PROOF **D\*K\*** - see catalogue 41 515

SOFT-SHIFT **F / S**

EXTERNAL DRAIN **Y** available for ISO 4401-05 sizes

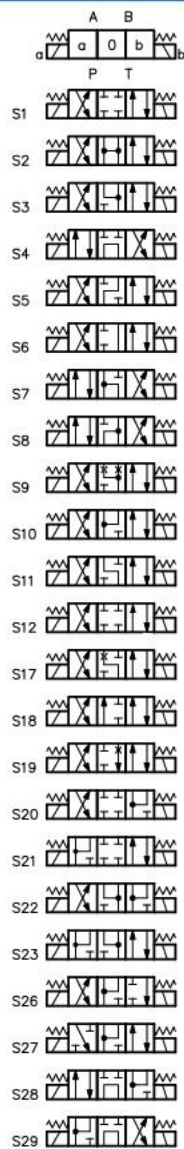
ALTERNATIVE SURFACE FINISHES: **W7** Zinc-Nickel (salt spray resistance up to 600 hours)

DS3 SPECIAL VERSIONS: **UL** certified coils - **R** fixing screws as 4WE6\*6X Rexroth



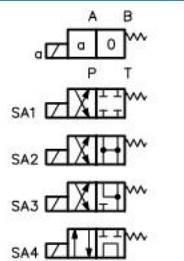
**S\***

2 solenoids  
3 positions  
spring offset



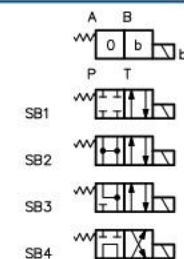
**SA\***

1 solenoid side A  
2 positions  
(middle + external)  
with spring offset



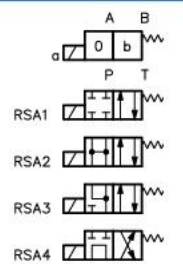
**SB\***

1 solenoid side B  
2 positions  
(middle + external)  
with spring offset



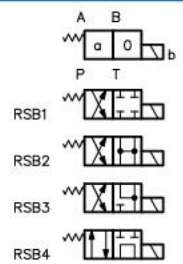
**RSA\***

1 solenoid side A  
2 positions  
(external + middle)  
with spring offset



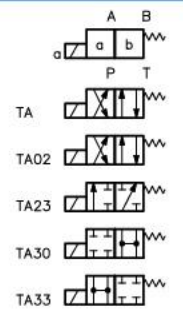
**RSB\***

1 solenoid side B  
2 positions  
(external + middle)  
with spring offset



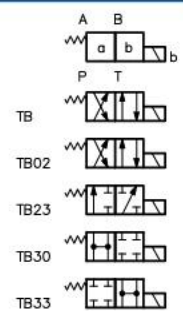
**TA\***

1 solenoid side A  
2 external positions  
with spring offset



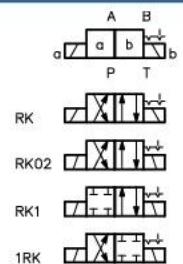
**TB\***

1 solenoid side B  
2 external positions  
with spring offset



**RK**

2 solenoids  
2 positions  
with detent



# DIRECTIONAL VALVES SOLENOID - PILOT OPERATED



MODEL CODE	E4	DSP7	E5	DSP10
CATALOGUE	41 400	41 420	41 400	41 440
SIZE (ND)	10	16	25	32
CETOP	05, R05	07	08	10
ISO 4401	05	07	08	10
TYPE	solenoid	solenoid	solenoid	solenoid
p max	320 bar	350 bar	320 bar	350 bar
p max high pressure vers.	420 bar	420 bar	420 bar	-
Q max	150 l/min	300 l/min	600 l/min	1100 l/min

### SPOOLS

S1; S2; S3; S4	■	■	■	■
S5; S18	■		■	
S6 to S12	■	■	■	
S20; S21		■		
SA1; SB1	■	■	■	■
SA2/SB2 to SA4/SB4		■		■
TA ; TB;	■	■	■	■
TA02; TB02	■	■	■	■
TA23 ; TB23	■	■	■	
RK; RK02; RK002	■	■	■	■

### COIL TYPE

D12; D24	■	■	■	■
D48; D110; D220	■	■	■	■
A24; A48; A110; A230	■	■	■	■
F110; F220	■	■	■	■

### COIL CONNECTIONS

K1	■	■	■	■
K7 (D12 and D24 coil)	■	■	■	

### MANUAL OVERRIDE

CM	■	■	■	■
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### VERSIONS

MONITORED **M** - see dedicated section at page 20

EXPLOSION PROOF **D\*K\*** - see catalogue 41 515

HYDRAULIC OPERATED VERSIONS **C** described in the valves datasheets

HIGH PRESSURE VERSION **H**

### FEATURES ++

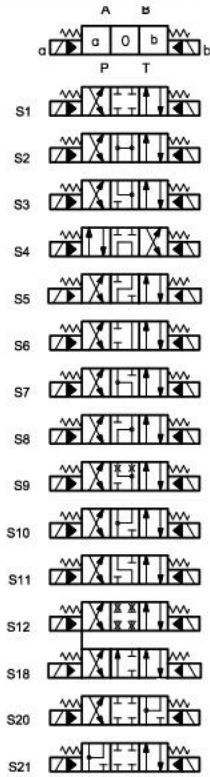
PILOT / DRAINAGE **I** internal - **Z** internal with pressure reducing - **C** internal with built-in backpressure valve  
**E** external (always verify application cases on valve datasheet)

OPTIONS: **C** stroke control - **D** shifting speed control - **G** stroke + shifting control - **P\***, **PF** restrictor subplate

ALTERNATIVE SURFACE FINISHES: **W7** Zinc-Nickel (salt spray resistance up to 600 hours)

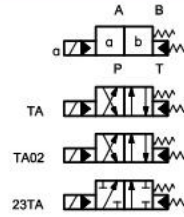
S\*

2 solenoids  
3 positions  
spring offset



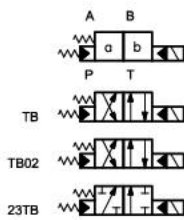
TA\*

1 solenoid side A  
2 external positions  
with spring offset



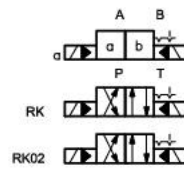
TB\*

1 solenoid side B  
2 external positions  
with spring offset



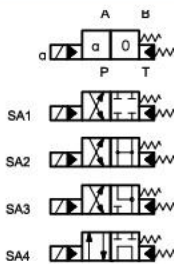
RK

2 solenoids  
2 positions  
with detent



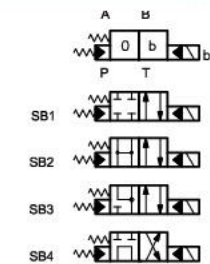
SA\*

1 solenoid side A  
2 positions  
(middle + external)  
with spring offset



SB\*

1 solenoid side B  
2 positions  
(middle + external)  
with spring offset



# DIRECTIONAL VALVES OTHER DEVICES CONNECTORS



MODEL CODE	DSH3		DSH3L		DSR3L		DSA3		DSC3		DSH5		DSA5			
CATALOGUE	41 600		41 605		41 610		41 620		41 630		41 600		41 620			
SIZE (ND)					06								10			
CETOP					03								05			
ISO 4401					03								05			
TYPE	lever		lever compact		roller cam		air		hydraulic		lever		air			
p max					350 bar								320 bar			
Q nom	75 l/min		60 l/min		75 l/min		75 l/min		75 l/min		150 l/min		120 l/min			

### SPOOLS

S1; S2; S3; S4	■	■			■	■			■	■				
S5 to S23							■	■						■
SA1; SA2; SA3; SA4	■						■	■			■	■		■
SB1; SB2; SB3; SB4							■	■						■
TA	■	■	■		■	■	■	■			■	■		■
TA02, TA23	■						■	■						■
TB							■	■						■
TB02, TB23							■	■						■
TAK	■	■										■		
TAK02, TAK23	■													
SK1; SK2; SK3; SK4	■	■										■		
SAK1; SAK2; SAK3; SAK4	■											■		
R					■									
RK							■	■						■
RK1, RK02; 1RK							■							■

### FEATURES ++

DSR3 VERSIONS: **L** compact - **H** heavy duty - **R** two roller (DSR3L only)

DSH\* / DSH3L ALTERNATIVE SURFACE FINISHES: **W7** Zinc-Nickel (salt spray resistance up to 600 hours)

MODEL CODE	ECA	ECB1	ECB2	ECD	ECH
CATALOGUE	49 000				
TYPE	EN 175301-803:2006 form A (ex DIN 43650)				
version	2 poles + GND	2 poles + GND + LED (led ON = energized)		bridge rectifier	RC damping circuit
supply	AC/DC	AC/DC		AC	AC/DC
voltage	up to 230 V	10 to 50 V	70 to 250 V	up to 230 V	up to 230 V
coil type	AC or DC	AC or DC	AC or DC	DC fed w. AC	AC or DC

### FEATURES ++

ECA COLOR : **B** black - **A** gray

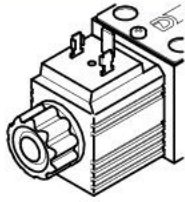
MODEL CODE	ECL	ECF
CATALOGUE	49 300	49 310
TYPE	power saving device	rapid energizing
plug	EN 175301-803 connector	
power supply	8 to 30 V DC	24 to 30 V DC
max current	6A	

For 12 and 24V DC coils



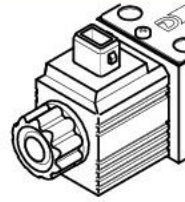
**K1**

DIN 43650  
(standard)



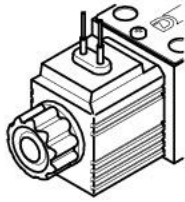
**K2**

AMP Junior



**K4**

outgoing cables



**K7, K7D**

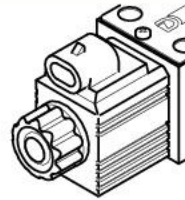
for male connector  
DEUTSCH DT06-2S

K7D with internal  
diode to avoid  
voltage peaks



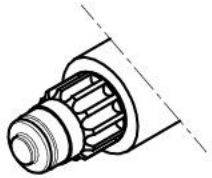
**K8**

AMP Super Seal



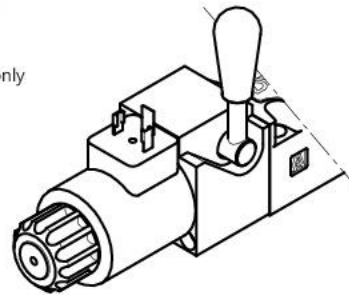
**CM**

Boot



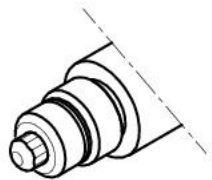
**CH**

Lever  
DC valves only



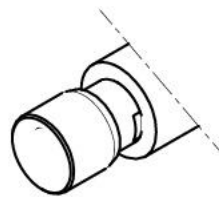
**CP**

Push  
DC valves only



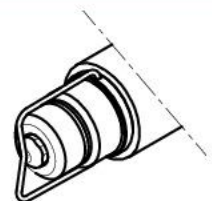
**CK1**

Knob,  
DC valves only

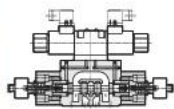


**CPK**

Push with detent  
DC valves only



# DIRECTIONAL VALVES SOLENOID - MONITORED



MODEL CODE	DS3M	DS5M	DSP5M DSP5RM	DSP7M	DSP8M	DSP10M
CATALOGUE	41 505					
SIZE	6	10		16	25	32
CETOP	03	05	P05, R05	07	08	10
ISO 4401	03	05	05	07	08	10
TYPE	direct op.	direct op.	pilot op.	pilot op.	pilot op.	pilot op.
p max	350 bar	320 bar		350 bar	350 bar	350 bar
Q max	80 l/min	120 l/min	150 l/min	300 l/min	600 l/min	1100 l/min

### FEATURES ++

The compliance of these valves with the CE safety requirements has been verified by TÜV Sud.

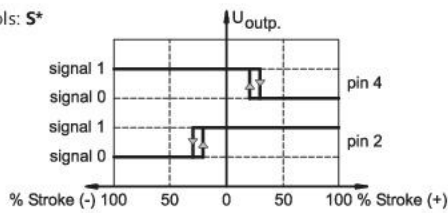
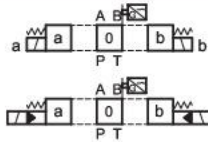
COIL TYPE: **D12** 12V DC - **D24** 24V DC - **D110** 110V DC - **D220** 220V DC

**K1** DIN 43650 connection



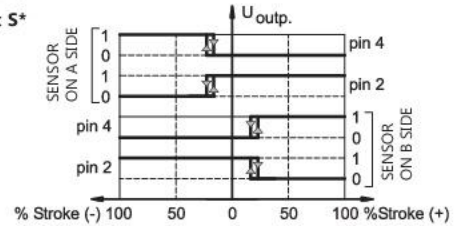
## RO

1 sensor  
middle  
position  
monitored  
spools: **S\***



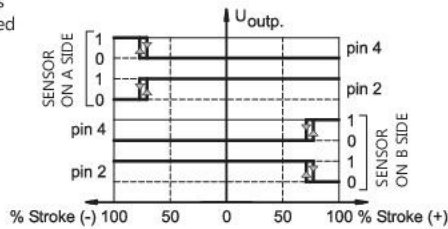
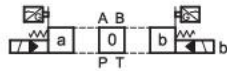
## MO

2 sensors  
middle  
position  
monitored  
spools: **S\***

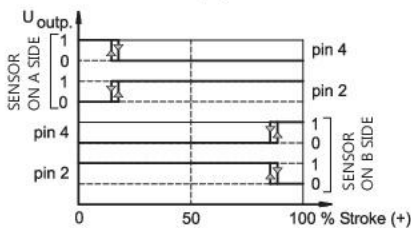


## MAB

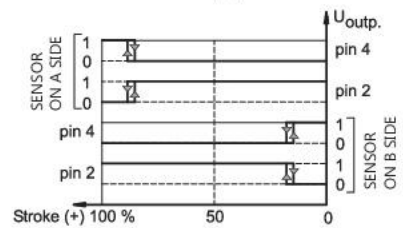
2 sensors  
2 external  
positions  
monitored  
spools:  
**S\***



2 positions  
monitored  
spools:  
**SA\*, TA\***



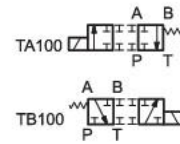
2 positions  
monitored  
spools: **SB\*, TB\***



### AVAILABLE SPOOLS/MONITORED POSITIONS

	S*	SA* SB*	TA TA100	TA02	TB TB100	TB02	RK
<b>DS3M</b>							
R0	■						
MA		■	■	■	■		
MB		■	■	■	■		
<b>DS5M</b>							
R0	■						
MA		■	■	■	■	■	
MB		■	■	■	■	■	
<b>DSP*M</b>							
R0	■						
MA		■	■		■		■
MB		■	■		■		■
M0	■						
MAB	■	■	■		■		

### SPECIALS

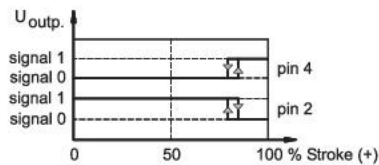
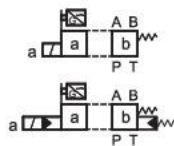


Refer to the 'solenoid operated' section for standard spools, and to the datasheet n° 41505 for the full range of available spools.

## MA

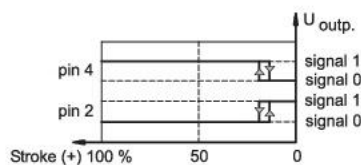
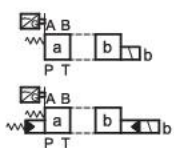
1 sensor  
spools:  
**SA\*, TA\***

actuated position  
monitored

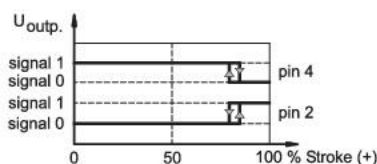


spools:  
**SB\*, TB\***

initial position  
monitored



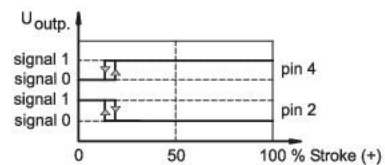
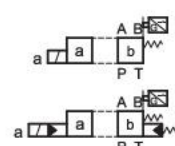
spools: **RK**  
'A' position  
monitored



## MB

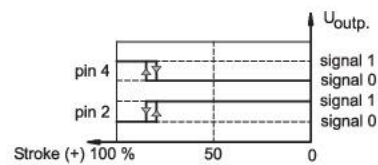
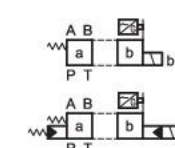
1 sensor  
spools:  
**SA\*, TA\***

initial position  
monitored

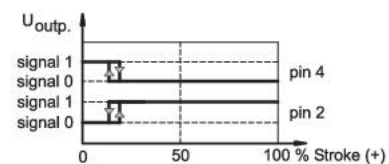
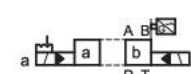


spools:  
**SB\*, TB\***

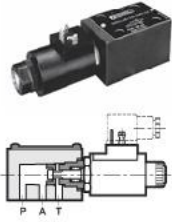
actuated position  
monitored



spools: **RK**  
'B' position  
monitored



# DIRECTIONAL VALVES LEAKAGE FREE

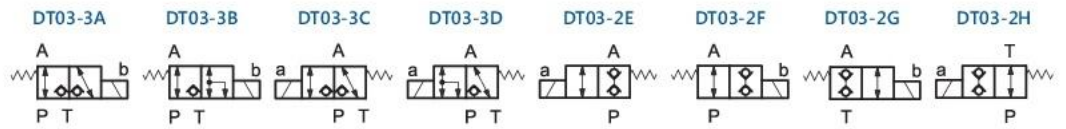


MODEL CODE	DT03-3A	DT03-3B	DT03-3C	DT03-3D	DT03-2E	DT03-2F	DT03-2G	DT03-2H
CATALOGUE	42 200							
Size (ISO)	4401-03							
TYPE	subplate mounting, 3-way solenoid operated				subplate mounting, 2-way solenoid operated			
p max	250 bar							
Q max	12 l/min	25 l/min	25 l/min	25 l/min	25 l/min	12 l/min	25 l/min	25 l/min

### FEATURES ++

SUPPLY VOLTAGES: direct current **12V-CC** 12 V - **24V-CC** 24 V; alternating current **24RAC** 24 V - **110RAC** 110V - **220RAC** 220 V  
 RESTRICTORS PLUG ON P LINE: **D08** orifice Ø0.8 - **D10** orifice Ø1

### SYMBOLS

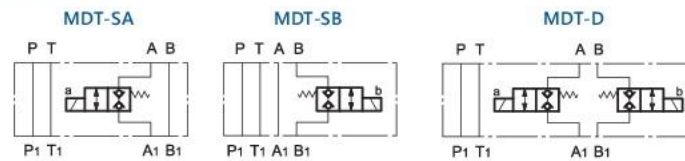


MODEL CODE	MDT-SA	MDT-SB	MDT-D
CATALOGUE	42 250		
Size (ISO)	4401-03		
TYPE	modular version		
p max	250 bar		
Q max	25 l/min	25 l/min	25 l/min

### FEATURES ++




SUPPLY VOLTAGES: direct current **12V-CC** 12 V - **24V-CC** 24 V; alternating current **110RAC** 110V - **220RAC** 220 V

### SYMBOLS





## PRODUCTION PLANTS

-  Diplomatic MS (Italy)
-  Diplomatic Hydraulics Shanghai
-  Continental Hydraulics (U.S.A.)

## SALES NETWORK

- Main Distributor



Our sales network covers 55 countries in the World. With a partner located at each corner of the Globe we can be always at your side.

The number of partners, distributors sales and assistance points is constantly growing.

To find your closest distributor please visit our website at:

[www.diplomatic.com/network](http://www.diplomatic.com/network)

or simply scan this QR code



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